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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,330	04/20/2004	Akifumi Nakamura	26102	2932

20529 7590 07/31/2006

NATH & ASSOCIATES  
112 South West Street  
Alexandria, VA 22314

EXAMINER
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HODGES, MATTHEW P

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/827,330

Applicant(s)

NAKAMURA, AKIFUMI

Examiner

Matt P. Hodges

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/18/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of group II in the reply filed on 5/10/2006 is acknowledged.

### ***Specification***

The disclosure is objected to because of the following informalities:

Page 2, line 32 appears to contain a typographical error. The word "desiccant" appears to be misspelled.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Hung et al. (US 6,140,763).

Regarding claims 7 and 8, Hung discloses (see figure 3) an organic EL device including in order a substrate (302), an anode (304), an organic layer (320) including a light emitting layer

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(324), and a combined cathode layer (330 and 310). The cathode layer is further divided into a buffer layer with an alkali metal included and a low resistance metal layer also including the alkali metal. (Column 10 lines 40-67). The alkali metal is Cs while the low resistance metal is Al.

Regarding claim 9, claim 9 is rejected for the same reasons as stated in the rejection of claim 7 above. The further limitations on the compounds are still only alternatively required with respect to the limitation of claim 7.

Regarding claim 10, Hung further discloses the width of the buffer layer with included alkali ions being between 15nm thick. (Column 14 lines 20-25).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hung et al. (US 6,140,763).

Regarding claim 11, Hung discloses the device as claimed (see rejection of claim 7 above) but does not appear to specify the width of the low resistance metal layer being 200nm. However the applicant fails to identify the use of a 200 nm low resistance layer to solve any problem or yield any unexpected result that is not within in the scope of the teachings relied upon. Further selection of the width of the cathode is dependent on the desired resistance of the

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final device along with the surface area covered by the cathode. The effect of the width on these values is well understood and varying the width of the low resistance cathode to control these attributes would require only routine experimentation by one having ordinary skill in the art. Thus it would have been an obvious design choice to one having ordinary skill in the art to use a 200 nm low resistance layer in the device as disclosed by Hung, since such a modification would only require routine experimentation of known attributes and values.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Strite (US 6,023,073) discloses the use of a multi-part cathode structure.

Kido et al. (US 6,013,384) discloses the use of a metal doped layer in addition to a low resistance metal layer in the cathode.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matt P Hodges whose telephone number is (571) 272-2454. The examiner can normally be reached on 7:30 AM to 4:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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